PLASTIC FILMS
VISKING COMPANY
DIVISION OF UNION CARBIDE CORPORATION
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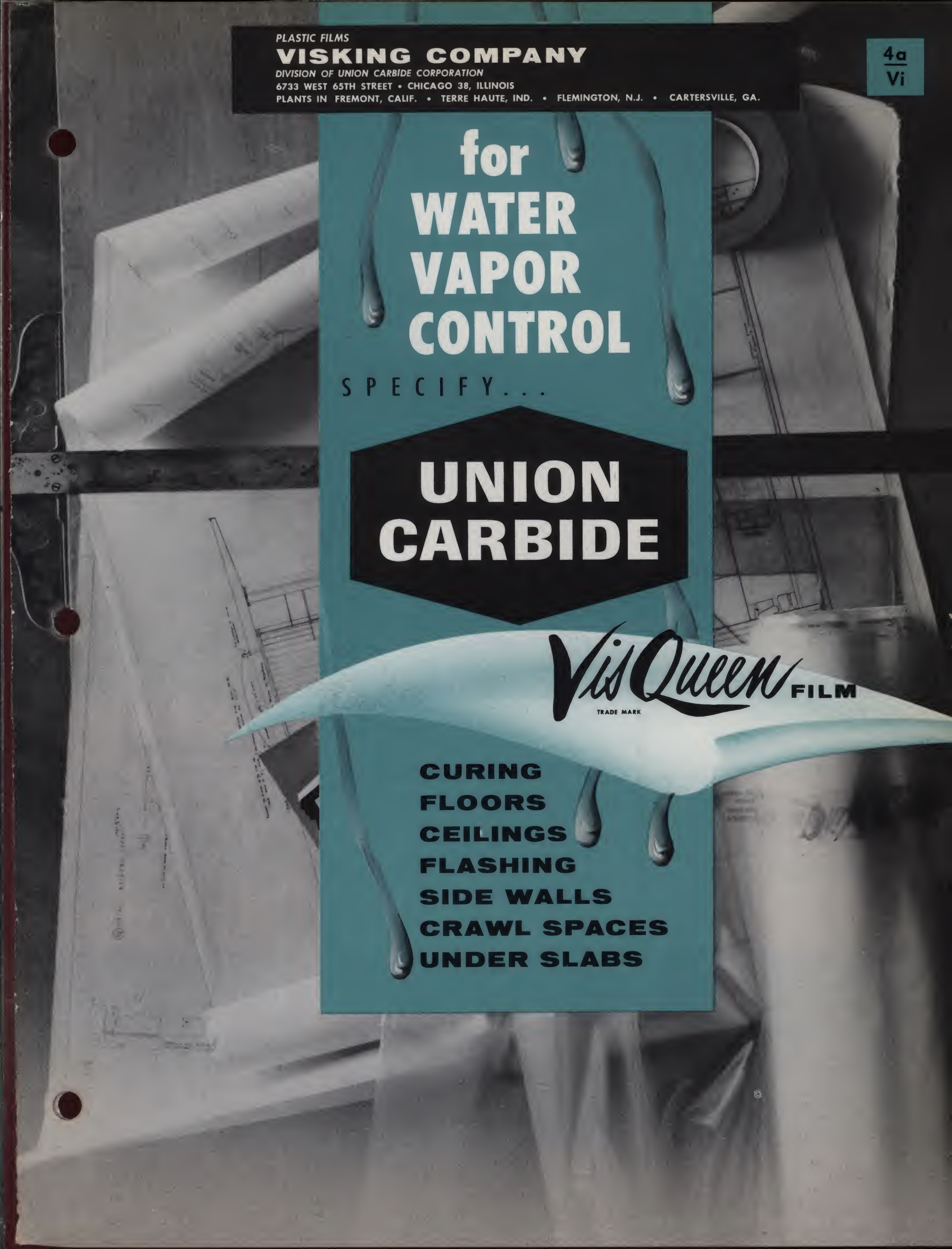


for WATER VAPOR CONTROL

SPECIFY...

UNION CARBIDE

VisQueen FILM

TRADE MARK

CURING
FLOORS
CEILINGS
FLASHING
SIDE WALLS
CRAWL SPACES
UNDER SLABS

VERSATILE UNION CARBIDE VisQueen FILM

TRADE MARK

VISQUEEN film is a pure plastic—virgin polyethylene film. It is flexible, strong, puncture and tear resistant, light weight, flexible in temperatures down to minus 70° F. VISQUEEN film is easy to install, does not embrittle, break or pinhole when creased.

Moisture control is the responsibility of the architect and contractor. Poor or no condensation control is apparent by paint peeling off exterior siding, lifting of tile or warping of wood floors, wood decay and musty odors. The only positive preventive control of condensation is an adequate water vapor barrier, properly installed.

VISQUEEN film meets F.H.A. minimum property requirements as set forth in F.H.A. Use of Materials Bulletin No. UM-20a, dated June 18, 1958, and water vapor requirements of Fed. Spec. UU-P-147b.

THESE REQUIREMENTS ARE FULFILLED BY "VISQUEEN" FILM

The Housing and Home Financing Agency, based on studies of the Forest Products Laboratory, has defined a good water vapor barrier as follows: "a good water vapor barrier should permit not more than 1 grain of water vapor to pass through an area 1 foot square in 1 hour when the water pressure is calculated on the basis of 1 inch of mercury when tested by a dry method."

VISQUEEN film meets these requirements with a 900% margin according to tests conducted at the University of Minnesota by Frank B. Rowley.* Another requirement set forth says: "it should have sufficient mechanical strength to permit handling without damage. It should also retain its vapor resistant qualities."

VISQUEEN film meets these requirements. VISQUEEN film, .004″ (4-mil) and .006″ (6-mil) thickness met the requirements and passed all tests under the test procedures established by the Federal Housing Administration in tests conducted by the United States Testing Co., Inc.

*Full test results available on request.

BLACK "VISQUEEN" FILM

Black VISQUEEN film is especially formulated for uses when exposure to extended periods of sunlight are required. Black VISQUEEN film is recommended for covering materials and equipment stored out of doors.

FLOORS

For air, dust, squeak and water vapor proofing of floors, VISQUEEN film should be applied over the sub-flooring in as full widths as possible.

CEILINGS

VISQUEEN film should be applied to the warm side of the ceiling joists with a lap the full width of the joists. Allow a six-inch lap onto the wall.

CONCEALED FLASHING

VISQUEEN film is used in the same manner around windows, doors, and sills as metal or metal coated flashing materials.

WATER VAPOR BARRIER

QUALITIES OF "VISQUEEN" FILM

- LIGHT WEIGHT
- STRONG
- TOUGH
- DURABLE
- ECONOMICAL
- ODORLESS
- WON'T GET BRITTLE
- FLEXIBLE
- WON'T STIFFEN WHEN COLD
- WON'T CRACK—SHATTER
- RESISTS TEARS AND PUNCTURES
- FLAME RESISTANT
- INERT—UNAFFECTED BY MOST ACIDS—ALKALIS
- WATERPROOF
- WON'T ROT OR MILDEW

TEMPERATURE AND HUMIDITY It remains flexible down to the minus 70° F, making it easy to put in place summer or winter. VISQUEEN film is unaffected by most acids, alkalis and most caustics because it is inert. Humidity has no effect because it will not absorb moisture.

PUNCTURE AND TEAR RESISTANCE— VISQUEEN film is soft and flexible yet puncture and tear resistant and does not pinhole when folded or flexed. If punctured, VISQUEEN film will not shatter or run.

LIGHT WEIGHT— VISQUEEN film provides 30,000 square inches to one pound of .001″ thickness. Up to 32′ seamless one piece widths can be handled with ease. It has strength without weight or bulk making application to side walls, forms, and under slabs, quick and efficient. 1000 sq. feet .004″ thickness weighs less than 20 pounds.

DUST PROOFING, AIR RESISTING— VISQUEEN film makes walls air resistant while providing a water vapor barrier. When applied over sub-flooring, it makes floors air, dust and squeak proof.

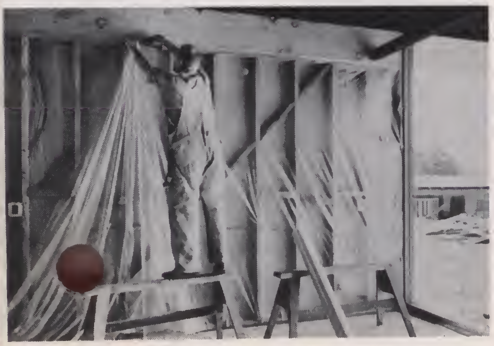
FLAME RESISTANT— When flame is applied, the film melts slowly. It will not flash.

DIMENSIONS— VISQUEEN film comes in rolls, folded for easy handling. It can be delivered in a single continuous roll up to 32′ wide, which means no seams to rupture. Standard seamless sheet widths are 3′, 4′, 6′, 8′, 10′, 12′, 14′, 16′, 20′, 24′, 28′, 32′.

VISQUEEN film is the first and foremost polyethylene film. Product of the long experience and outstanding research of VISKING COMPANY Division of UNION CARBIDE CORPORATION.

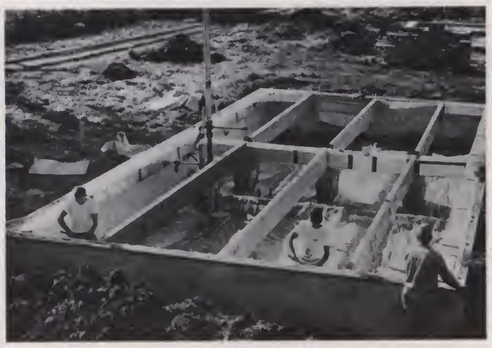
SIDE WALLS

VISQUEEN film is applied horizontally on warm side of exterior walls over insulation by stapling film to studding. Allow 3-inch lap on floor and ceiling.



CRAWL SPACE

VISQUEEN film is laid on the ground, lapped up against the foundation wall and held in place by sand, dirt or scrap lumber.



UNDER SLABS

Lay VISQUEEN film over layer of sand to protect from punctures. Allow six-inch lap with top lap in direction in which concrete is spread.

PLASTIC FILMS
VISKING COMPANY

UNION CARBIDE

VisQueen POLYETHYLENE FILM

TEST RESULTS

WATER VAPOR PERMEABILITY IN PERMS

Thickness (in.)	Perms
.001	.67
.002	.33
.003	.22
.004	.17
.005	.13
.006	.11
.007	.095
.008	.08
.009	.075
.010	.07

Water Vapor Permeability: In accordance with A.S.T.M. Method E96-53T procedure E (Made at 100°F and 90% relative humidity with dry cup.)

Perms: grains per square foot per inch of mercury difference in vapor pressure at standard test conditions.

DIRECTIONAL PROPERTIES OF "VISQUEEN" FILM

	Dg. F.	Longitudinal Direction	Transverse Direction
Tensile strength, lb. per square in.......at	77.0	2,482	1,597
	32.0	2,987	2,050
	—0.4	3,428	2,524
Elongation, percent stretch..............at	77.0	228	184
	32.0	100	53
	—0.4	71	42
Tear strength, g. per mil thickness......at	77.0	181	123
	32.0	44	291
	—0.4	28	262
Impact puncture resistance, in oz. per in. of tear..............................at	77.0	90	50
	—0.4	61	53
Flexure................................	—0.4	Satisfactory	Satisfactory

Average thickness .00207 in.

IMPORTANT: Be certain that VISQUEEN film is used for the water vapor barrier you specify. VISQUEEN film is the first and foremost polyethylene film. VISQUEEN film is the pioneer polyethylene film in the building field, pioneer in the development of wide, seamless widths up to 32 feet. Only VISQUEEN film has the benefit of the research and technical experience of VISKING COMPANY, Division of Union Carbide Corporation.

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BE CERTAIN THAT YOU SPECIFY UNION CARBIDE VisQueen FILM

CURING

Under slabs. VISQUEEN film stops cement water solution loss into the fill; and used over the slab, prevents spalling and dusting from uneven curing.

ENCLOSURES

Use as protection for building interiors over openings in side walls. Transparency allows light in—keeps weather out. Black VISQUEEN film provides good protection for machinery and material at job sites.

MATERIAL COVER

VISQUEEN film provides sure air, dust, and moisture protection for materials and machinery on the job.

Protects against corrosion and weather damage. Keeps lumber and brick piles clean and dry.

USE SPECIFICATION WATER VAPOR BARRIER

for Slab-on-Grade Construction

material:
Shall be .004″ (4-mil) natural VISQUEEN film over sand, or .006″ (6-mil) natural VISQUEEN film over gravel or fines.

preparation:
The sub-grade site shall be smoothed by any suitable method which will prevent protrusions that may cause damage or rupturing of the VISQUEEN film.

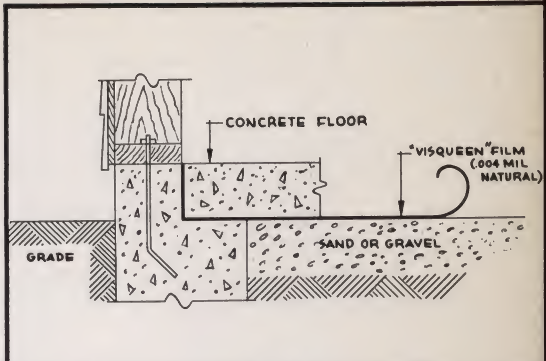
installation:
The widest practical seamless widths of natural VISQUEEN film shall be applied by laying it on the sand or gravel surface. Where a lap is required, the VISQUEEN film shall be lapped not less than 6″, with the top lap placed in the direction of the spreading of the concrete.

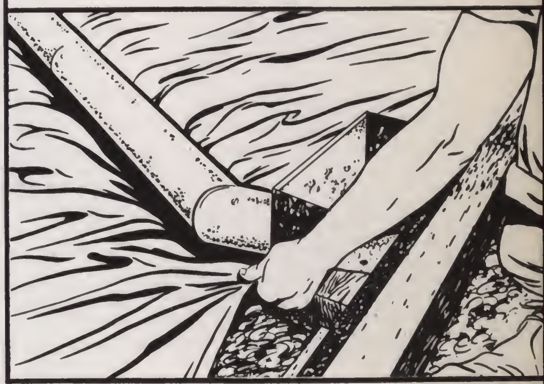
If below-slab insulation is used, it shall be applied over the VISQUEEN film, prior to pouring the concrete.

Where radiant heating pipes or perimeter heating ducts are to be used, they should be laid directly on top of the film and the concrete poured in the conventional manner.

When reinforcing mesh is used, lay mesh directly over film prior to pouring concrete, taking necessary precautions to prevent film punctures.

Film shall be cut carefully around all pipes and wiring outlets, and pressure-sensitive tape shall be applied to insure maximum barrier effectiveness.





USE SPECIFICATION

UNION CARBIDE

VisQueen FILM

SUBFLOOR VAPOR BARRIER

Wood Block, Asphalt, or Vinyl Tile

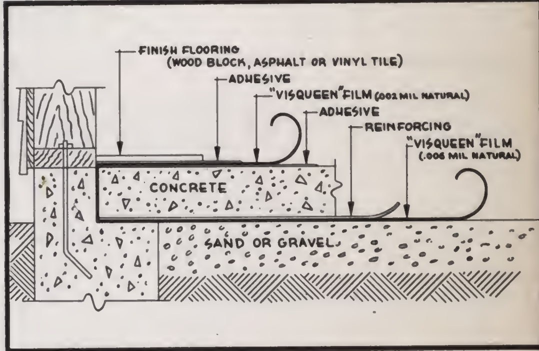
material:
Shall be .002″ (2-mil) natural VISQUEEN film in widest practical widths.

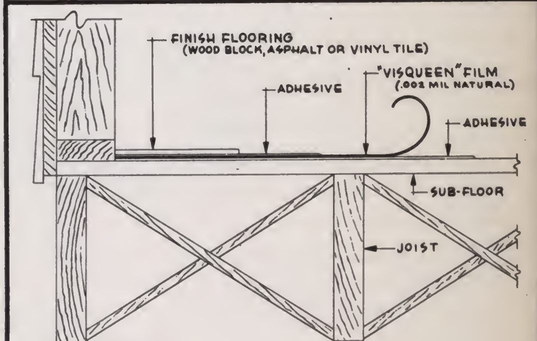
preparation:
All surfaces shall be clean and dry prior to installation.

installation:
Apply a cold mastic or adhesive at a covering rate of approximately 80 square feet per gallon, depending on the condition of the surface. Allow to dry—mastic, usually 15 to 30 minutes; adhesive, 1 to 15 minutes, depending on temperatures and ventilation.

Lay natural VISQUEEN film .002″ (2-mil) thick in widest practical widths. Lap film 4″ where joining is necessary.

Apply finish floor with usual mastic and adhesive preparations in accordance with wood or tile manufacturers' recommendations.

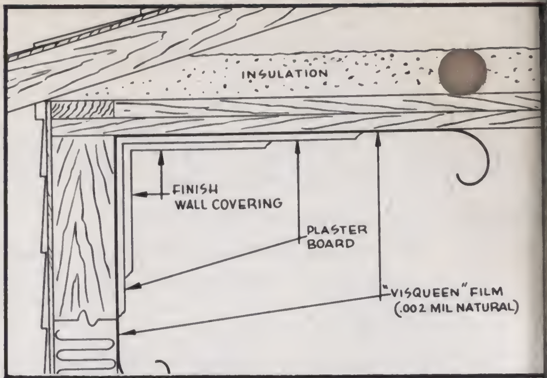

FINISH FLOORING (WOOD BLOCK, ASPHALT OR VINYL TILE)
ADHESIVE
"VISQUEEN" FILM (.002 MIL NATURAL)
ADHESIVE
REINFORCING
"VISQUEEN" FILM (.006 MIL NATURAL)
CONCRETE
SAND OR GRAVEL


FINISH FLOORING (WOOD BLOCK, ASPHALT OR VINYL TILE)
ADHESIVE
"VISQUEEN" FILM (.002 MIL NATURAL)
ADHESIVE
SUB-FLOOR
JOIST

USE SPECIFICATION

WATER VAPOR BARRIER

for Exterior Walls and Ceilings



material:
Shall be .002″ (2-mil) natural VISQUEEN film in the widest practical width.

preparation:
All exterior walls and ceilings, whether of lath and plaster, gypsum board, plywood, or fibre-board, shall have a VISQUEEN film vapor barrier.

installation:
The VISQUEEN film shall be applied as near as possible to the warm side of the construction, but shall be applied after insulation is installed and before lathing.

Film shall be applied horizontally and attached with staples with 1/4″ to 3/4″ leg length applied with a Duo Fast or similar gun or compression staple tacker, spaced not more than 6″ on center.

No stapling or attachment is required on intermediate studs or joints except as where may be necessary to hold the film in place.

Where lapping is required, it shall be done over solid and continuous backing and shall be a minimum of 3″.

Film should be brought up tight against electric outlets, door and window frames, and similar openings.

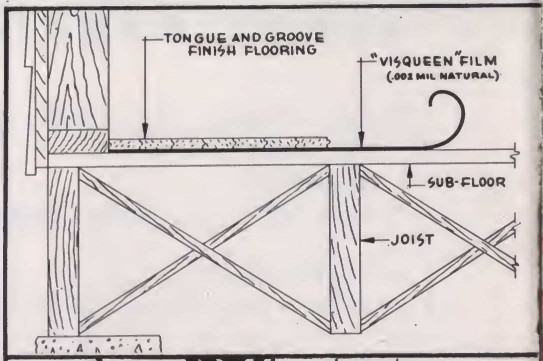
UNION CARBIDE

VisQueen FILM

USE SPECIFICATION

SUBFLOOR VAPOR BARRIER

Conventional Tongue-and-Groove Finish Floors


TONGUE AND GROOVE FINISH FLOORING
"VISQUEEN" FILM (.002 MIL NATURAL)
SUB-FLOOR
JOIST

material:
Shall be .002″ (2-mil) natural VISQUEEN film in widest practical widths.

preparation:
All surfaces shall be clean and dry prior to installation.

installation:
Lay .002″ (2-mil) natural VISQUEEN film perpendicular to the direction of the subfloor, using the widest practical widths. Where lapping is required, a 4″ lap should be used.

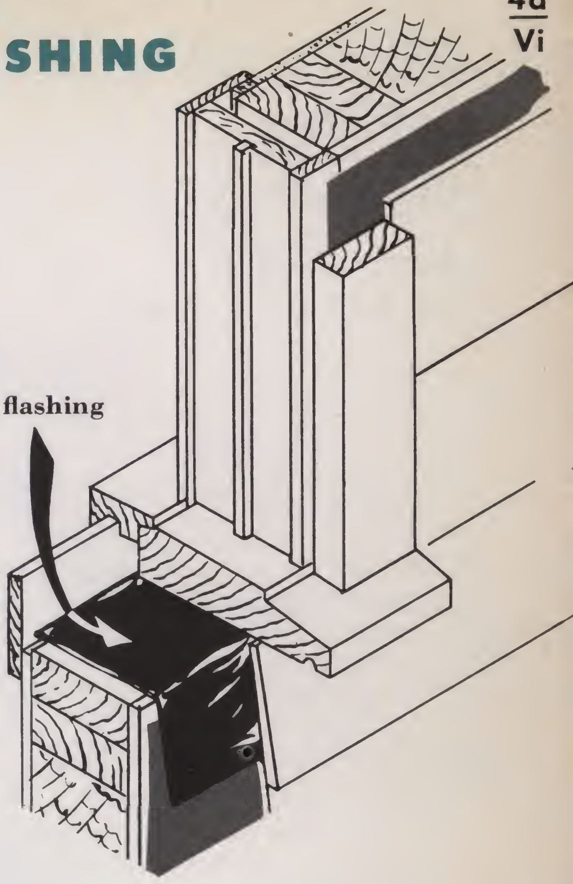
Staple film at wall line as necessary to anchor film in place, using a 1/4″ to 3/4″ leg length stapler, applied with a Duo Fast or similar gun or compression stapler tacker.

Apply finish floor in the conventional manner.

USE SPECIFICATION

WINDOW SILL CONCEALED FLASHING

Exterior Wood Siding



material:

Shall be .006″ (6-mil) black VISQUEEN film.

preparation:

Framing members shall be free of protrusions and erected in a workmanlike manner. Sheathing and sheathing paper shall be applied in accordance with manufacturers' recommendations.

installation:

VISQUEEN film shall be a single extruded sheet. It shall be of a length sufficient to provide flashing for the window plate with 4″ laps on each of the vertical framing members. It shall be of a width sufficient to provide flashing from the underside of the window unit stool, across the plate to 4″ down on the exterior sheathing.

Where sheathing paper is used, VISQUEEN film flashings shall be placed over the paper between the paper and exterior siding. VISQUEEN film flashings shall be snugly placed and secured with VISQUEEN polyethylene tape prior to placing the window unit and exterior siding.

Window units and exterior siding shall be carefully installed to prevent rupturing of the VISQUEEN film flashing.

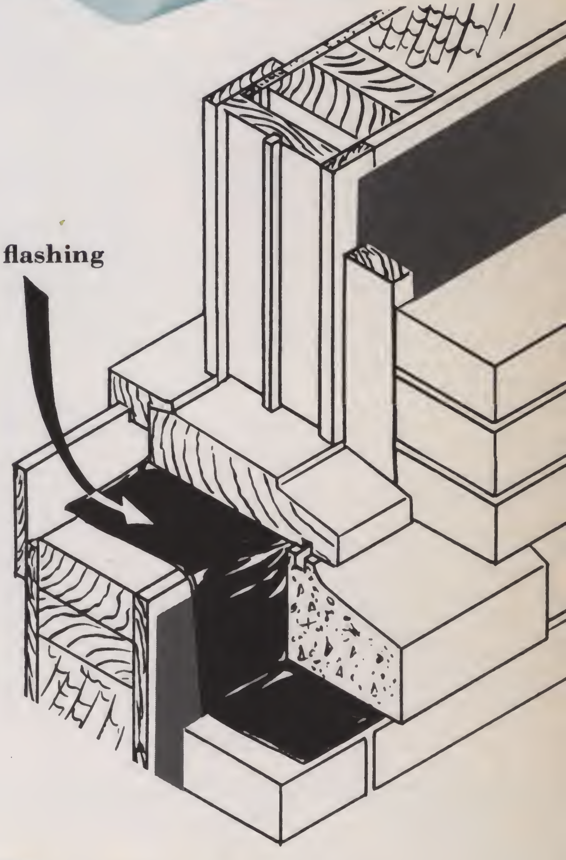
USE SPECIFICATION

UNION CARBIDE

VisQueen FILM

WINDOW SILL CONCEALED FLASHING

Exterior Masonry Veneer Construction



material:

Shall be .006″ (6-mil) black VISQUEEN film.

preparation:

Framing members shall be free of protrusions and erected in a workmanlike manner. Sheathing and sheathing paper shall be applied in accordance with manufacturers' recommendations.

installation:

VISQUEEN film shall be a single extruded sheet. It shall be of a length sufficient to provide flashing for the window plate with 4″ laps on each of the vertical framing members. It shall be of a width sufficient to provide flashing from the interior edge of the plate to the exterior face of the masonry.

VISQUEEN film flashing shall be snugly fitted, secured with VISQUEEN polyethylene tape to the framing members, extended over, and laid on top of the masonry course which will be directly underneath the exterior masonry sill. Mortar shall then be troweled on top of the VISQUEEN film flashing and the exterior masonry sill installed.

Window units shall be carefully installed to prevent rupturing of the VISQUEEN film flashing.

USE SPECIFICATION CURING

UNION CARBIDE

VisQueen FILM
TRADE MARK

WHITE OPAQUE POLYETHYLENE SHEETING

1. Scope—These specifications cover 4-mil (.004″) white polyethylene sheeting for curing Portland cement concrete.

2. General Requirements—The white polyethylene sheeting shall consist of a single extruded sheet, free of joinings by beading, heat sealing, tapes or liquid adhesives. It shall be manufactured from virgin resin only and shall be free from visible defects and have a uniform appearance. It shall be sufficiently strong and tough to permit its use under the conditions existing on highway structural work without tearing or otherwise becoming unfit for the use for which it is intended.

3. Thickness, Length and Identification—The sheeting shall have a nominal commercial thickness of 4-mils (.004″).

   If minus tolerances in thickness result in the polyethylene sheeting not meeting requirements 4, 5 and 6 of this specification, it shall not be used more than once for curing concrete.

   Each roll or individual blanket carton shall be clearly labeled to show the name of the manufacturer.

4. Moisture Retention—The white polyethylene sheeting material shall be tested for moisture retention as prescribed in the Method of Test for Water Retention Efficiency of Liquid Membrane Forming Compounds and Impermeable Sheeting Materials for Curing Concrete, A. S. T. M. Designation C 156.

5. Reflectance—The sheeting shall have an apparent daylight reflectance of not less than 70% relative to magnesium oxide.

6. Tensile Strength and Elongation—The material shall be tested for tensile strength and elongation as prescribed in the current Tentative Method of Tests for Tensile Properties of Thin Plastic Sheets and Films. (A. S. T. M. Designation D 882 54T Method C.)

   The sheeting shall conform to the following requirements for tensile strength at 77°F:

Machine Direction	Transverse Direction
1700 lbs. (Min.)	1200 lbs. (Min.)

   The sheeting shall conform to the following requirements for elongation at 77°F:

Machine Direction	Transverse Direction
225% (Min.)	350% (Min.)

V-1096 REV-8-60

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USE SPECIFICATION CURING

UNION CARBIDE

VisQueen FILM
TRADE MARK

WHITE OPAQUE POLYETHYLENE SHEETING

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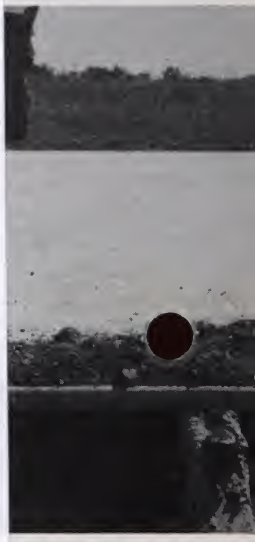

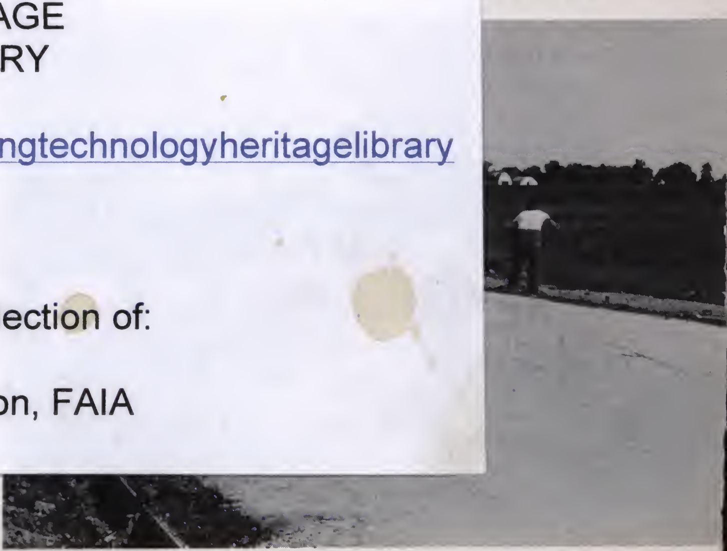

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The sheeting shall conform to the following requirements for elongation at 77°F:

Machine Direction	Transverse Direction
225% (Min.)	350% (Min.)

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